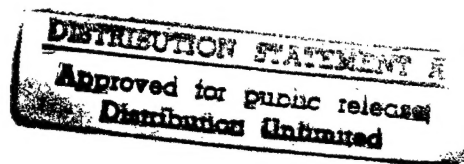


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Worldwide Report

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27 July 1984

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CAMPAIGN TO CONTROL LEPROSY, TUBERCULOSIS DESCRIBED

Luanda JORNAL DE ANGOLA in Portuguese 15 Jun 84 p 10

[Interview with Dr Carlos Alberto, executive head of the Emergency Tuberculosis Control Program, by Joaquim Artur; date and place not given]

[Text] Tuberculosis and leprosy are both endemic diseases which have been the focus of great concern on the part of our authorities, because of the high number of new patients being seen each year and the high death rate from them in our country. For this reason, they have been included in the emergency programs which have been pursued since 1983.

In fact, both tuberculosis and leprosy are diseases affecting people in various age groups of the population, from newborn infants to adults, even affecting the elderly. Normally their course of development is a long one, and if not treated, they can cause the death of the patients or a certain type of lesions, which are, naturally, irreversible and debilitating.

We questioned Dr Carlos Alberto, executive head of the Emergency Tuberculosis Control Program.

[Question] What is the reason for a program integrating tuberculosis and leprosy?

[Answer] Nowadays, there are medicines so effective in the treatment of tuberculosis and leprosy that even the so-called contagious forms, if subjected to regular treatment, cease to be contagious at the end of a short period of time, such that there is no justification for the continued existence of special aid units--dispensaries, sanatoria or leprosaria for the treatment of tuberculosis or leprosy exclusively, apart from the regular units of the National Health Service, as in the past.

It has also been noted that when the diagnosis of the disease is made, the patients have already lived at length with the population, have already established their contacts, whether with the family, at the workplace or elsewhere. Those who associate most closely or live with the patients are those who should be sought out among the population.

Combatting Discrimination

For these reasons, and also to eliminate the discriminatory nature of treatment, tuberculosis and leprosy should be treated in the regular units of the

National Health Service, that is to say at the health stations and centers. Obviously, where there already are previously established specialized bodies --dispensaries, leprosaria, sanatoria, etc., they should naturally continue the work they have been doing.

Integration also means, in functional terms, being able to use the human and material resources available jointly and more rationally in combatting these two endemic diseases, since methodologically and operationally, they have many points in common.

[Question] Can you give us a better definition of the characteristics of these diseases?

[Answer] Tuberculosis is a disease caused by a bacterium, the Mycobacterium tuberculosis, commonly called Koch's bacillus, after the scientist who first identified it. It can affect all the organs, from the lymphatic ganglia to the bones, intestines and the suprarenal glands, but above all the lungs. These latter organs are more seriously affected in 80 percent of the cases, and pulmonary tuberculosis is also the form which represents the greatest public health problem.

Characteristics of Tuberculosis

In fact, the statistics show that more than 90 percent of tuberculosis patients have pulmonary tuberculosis, and it is this form of the disease which constitutes the public health problem when it comes to combatting tuberculosis.

Pulmonary tuberculosis is a disease which results from the active lesions produced by the localization of Koch's bacillus in the lungs. In these organs, the bacilli cause lesions which may or may not be localized, depending on whether or not the organism encounters resistance.

When a patient coughs, he expectorates many particles containing the bacillus, thus transmitting the disease to those around him. The following are the most important symptoms of pulmonary tuberculosis: coughing, expectoration, naturally yellowish in color, weight loss, asthenia, or in other words loss of strength, fever and loss of appetite.

The coughing, expectoration and weight loss are consistently frequent symptoms. Thus whenever a patient presents himself at a health station or center or dispensary with such symptoms lasting more than 3 weeks, the possibility of pulmonary tuberculosis should be considered.

Leprosy is a chronic infectious disease which attacks above all the nervous system but is manifested in the skin.

It can be diagnosed and generally treated such as to leave no aftereffects provided treatment is proper and is started early. If not treated effectively, leprosy can cause serious physical deformation. If not prevented and treated, such deformation causes serious emotional problems in patients and seriously threatens their social life. The disease is caused by a bacterium,

specifically *Mycobacterium leprae*.

[Question] Are the same methods of diagnosis used for tuberculosis and leprosy? What is done then? Is treatment begun immediately? Is the patient isolated? Is the family summoned? Or is the patient hospitalized?

Treatment of the Diseases

[Answer] The first step to be taken is to confirm the diagnosis, that is to say to identify the bacillus in the sputum. A very simple examination is made which makes it possible to establish if the patient is suffering from pulmonary tuberculosis. It is a laboratory examination using a bacilloscope, a process involving the observation of bacilli in the sputum through a microscope.

This type of examination makes it possible to establish in 80 to 90 percent of the cases whether a patient is tubercular. It can be carried out in any type of medical aid unit, health station or health center, or a field tent. No electricity is required, and the only expensive equipment needed is a microscope. There is no need for a highly skilled laboratory technician, since only basic training is required. This is also the cheapest method and the only one which enables us to establish whether a patient is tubercular, under the current conditions for diagnosis in our medical aid units.

[Question] How is the disease treated?

[Answer] Treatment of a tubercular patient must follow certain principles, of which the following are the most important:

1. It must be regular and supervised whenever possible.
2. Every patient must pursue regular treatment, on an outpatient basis.
3. The patient must participate and cooperate in his treatment from the beginning.
4. No patient should begin treatment without being registered in a medical aid unit, which will guarantee him medical and health assistance.

Education for Combatting Disease

The families of patients should be made aware and informed of the fact that tuberculosis is a curable disease, and that the patient does not need to be hospitalized but rather to pursue regular treatment.

After treatment is begun, the patient ceases to transmit bacilli by means of expectoration within a short time, and thus can live with his family.

The workers in the medical aid units of the National Health Service who are responsible for the treatment of tuberculosis should be well enough trained and prepared to pass on this knowledge to the patients and their families,

since health education is extremely important for the patient, so that he can truly cooperate in his treatment.

Following this general discussion, we asked Dr Carlos Alberto to talk to us about the organization of the campaign against tuberculosis and leprosy in our country.

[Answer] We can tell you that the Department for Tuberculosis Prophylaxis and Treatment (SCT) was established in 1957, and it was given technical and administrative autonomy in 1964.

The strategy of this department was based on vaccination of all Mantoux negative individuals with BCG by the mobile vaccination brigades and tracking of cases when suspicious lesions were revealed by X-rays, through the three polyvalent mobile brigades.

Where leprosy is concerned, control activities were carried out by mobile teams who sought out and tracked cases and administered treatments through established bodies such as leprosaria and health centers and stations.

Beginning in 1974, the departments for combatting tuberculosis and leprosy were separated, with a loose integration existing for the activities of these departments. The lack of a national program for control, norms and technical guidance and the abandonment of activity by the mobile brigades led to a deterioration in the situation.

A Worrisome Situation

[Question] That being the case, what is the present epidemiological situation?

[Answer] The existence of a standard methodology for reporting on the various ages groups does not make analysis of the existing data possible, either on the urban or rural, but in both the rate of incidence (new cases) is high.

The figures we have do not reflect the reality, because they have to do basically with cases which were passively recorded in areas having dispensaries for the treatment of tuberculosis and leprosy, which provide coverage for only about 15 percent of the total population.

According to the statistics, 498 persons died of pulmonary tuberculosis in 1983, and 7,002 new cases were reported. These figures do not reflect the reality, since if overall statistical information were collected they would be surpassed. It must be borne in mind that in a number of areas in our country, because of the current war conditions and difficulties of various sorts, health supervision is difficult.

Where leprosy is concerned, 184 cases were reported.

[Question] What has already been done within the framework of the national program for the control of tuberculosis and leprosy?

[Answer] This integrated program of 5 years' duration has two phases: one for preparation and another for attack.

We can state that in the preparatory stage, materials have already been ordered and their arrival in the country is expected next July. A seminar has been held for provincial coordinators, and there are two individuals responsible for the program now in each province. Last March, a refresher seminar was held for laboratory technicians in the provinces of Luanda and Bengo. Next September, a national seminar on leprosy will be held in Lubango, with a view to training cadres who will be responsible for implementing the ongoing program activities.

A study on the standardization of the therapeutic measures to be pursued in all health units has also been made. A study of the needs in each province for medicines, reagents, microscopes, plates and other items needed for the diagnosis and treatment of the two diseases is also to be made. A reporting and recording system was organized, to ensure that in the current phase all information will be channeled into the program on a central level.

Stepping Up the Battle

[Question] What are the goals for this year?

[Answer] For this year, we propose to examine 40 to 60 percent of the population, which is estimated at 1,200,000, and to track and treat 8,500 tuberculosis patients, 900 new leprosy patients and 5,000 old ones, and to undertake the physical and socioeconomic rehabilitation and advancement of at least 10 percent of the disabled patients.

The prospects for the medium time range include the tracking and early treatment of tuberculosis and leprosy in the peripheral health units (centers and stations), with the resulting integration of the antituberculosis-leprosy program in primary health care, and the gradual development of the capacity to rehabilitate leprosy patients and to reach 40 to 60 percent of the total population of the country through examination in the established units. Research work on the two diseases will also be pursued through a future public health reference laboratory, in which it will be possible to carry out sensitization studies, as well as to evaluate the quality of diagnosis in the regional laboratory units accurately.

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CSO: 5400/149

BRIEFS

DISEASES IN MAKELA DO ZOMBO--The health situation in the municipality of Makela do Zombo is threatened by malaria, diarrhea of various sorts, whooping cough, measles and leprosy, the ANGOP has been informed by the administrator of the municipal hospital, David Panzo. He clarified his statements, giving substantial figures for these epidemic and endemic diseases. A total of 7,983 persons were seen during the first quarter of this year alone, as compared to 59,872 cases of disease reported last year. Another 6,311 children were treated for infantile paralysis in 1983, as were 5,941 adults for diphtheria. The administrator noted such difficulties as the insufficiency of medicines and installations and the lack of mattresses, electricity and potable water. [Text] [Luanda JORNAL DE ANGOLA in Portuguese 7 Jun 84 p 3] 5157

CSO: 5400/149

HEALTH MINISTER INTERVIEWED, GIVES CHOLERA STATISTICS

Dhaka THE NEW NATION in English 30 May 84 p 8

[Text]

A total of 1137 people died of cholera in last two months (April-May) in 10 districts as the disease broke out in its acute (classical) form. Minister for Health and Population Control Major General M Shamsul Haque said in Dhaka yesterday.

Talking to ENA at his Secretariat chamber here, the minister said the total number of persons attacked by the disease during the period was 22,593.

The minister said classical acute cholera reappeared in Bangladesh in April this year. In that month alone 997 persons had died. Of them 349 died in Bhola, 294 in Pirojpur, 180 in Faridpur, 86 in Jessore, 52 in Barisal and 36 in Borguna.

The minister said the percentage of death when compared to the past two years could not be described to be very high. He said in 1983 four thousand thirtyseven persons had died of cholera out of an estimated three lakh cases. In 1982 the number of death was estimated at 5241 out of 70,530 cases.

Most of the deaths had occurred in April and May of those two years because the disease assumes an epidemic proportion during that time of the year.

He said this year the mortality rate was estimated to be around five per cent in case of classical form of cholera and less than one per cent in case of cholera.

The minister said since April this year the incidence of cholera had declined and the per-centage of mortality also fell as the government had taken a sustained and comprehensive measure to combat the disease. The minister said in all 360 medical teams consisting of doctors trained by International Centre for Diarrhoeal diseases and Research, Bangladesh (ICDDR,B) Government Health Service Physicians and other trained health workers were sent to the affected areas.

The minister said the classical form of cholera has no prevention. The injection used to be given earlier as anti-cholera vaccine had no efficiency in the prevention of cholera he added. Nonetheless he said because of the early alert given by the ICDDR the government could take early measures and send medical teams to the affected areas.

He said the most effective antidote for classical form of cholera as well as the ordinary form was the Oral Rehydration Solution (ORS) evolved by the ICDDR,B. Several million packets of ORS were sent along with medical teams.

300 DIE OF DIARRHEAL DISEASES IN DISTRICTS

Dhaka THE BANGLADESH OBSERVER in English 5 Jun 84 p 9

[Text] Diarrhoeal diseases have broken out in an epidemic form in rural areas recently taking a heavy toll of lives. Over 300 persons died of the disease so far.

Scarcity of pure drinking water, onslaught of food, unhygienic living condition and lack of proper measures contributed to the quick spread of the diseases like gastroenteritis, cholera and other intestinal disorders.

Netrakona

Our Netrakona Correspondent says Cholera bacillary dysentery and gastroenteritis have broken out here and claimed at least 300 lives in different parts of the district during the last three months.

Some four thousand people were attacked with the diseases. The worst-hit areas are: Kalmakanda, Mohangani, Khaliajuri and Madan Upazilas.

Shortage of medicine including saline is prevailing in the areas hampering proper and timely treatment of the patients.

Measures taken to combat the diseases are also inadequate.

Habiganj

Our Habiganj Correspondent writes: Cholera has broken out in different parts of Habiganj district and 12 persons died of the disease so far. Of them eight persons died in Panjumda Union in Hagibanj Upazilla and four died in Lakhai Upazila.

The affected areas are: Islampur Panjumda Shankarpur and Rukanpur villages. The disease has also broken out in some areas of the Beniachong and Azmirigani Upazilas.

Meanwhile, shortage of medicine is prevailing in the affected areas.

Brahmanbaria

BSS adds from Brahmanbaria: Three persons died of gastroenteritis and about 25 others were attacked with the disease during the last seven days in Chatalpur union under Nasirnagar Upazila.

The affected villages are Kattal Kandia, Faharadia, Ratanpur, Kachua, Patair and Chatalapar. Acute scarcity of drinking water appears to be the cause of the outbreak of the disease.

CSO: 5450/0056

BRIEFS

DIARRHEA IN DAULATPUR--Daulatpur, May 27--Ten persons died of diarrhoea in the Daulatpur industrial area which broke out in several places. Over 100 persons were attacked with the disease during the last few days. When contacted, the local I.D. Hospital source informed this correspondent that so far six persons died and many were treated at the hospital. The affected villages are Deana Daulatpur, Khalishpur, Alammagar and Phulbari. The hospital source disclosed that precautionary measures have already been adopted and over five hundred persons in this area have been inoculated. The newly constructed Health Coruplex at Jamira under Phultala upazila was opened recently. The Director of Population Control inaugurated the centre while Mr Abdur Rahim Chowdhury, Deputy Commissioner, Khulna presided. [Text] [Dhaka THE BANGLADESH OBSERVER in English 29 May 84 p 9]

CHITTAGONG DIARRHEA EPIDEMIC--The diarrhoea has spread in an epidemic form in Chittagong City. The disease has so far claimed the lives of 4 persons. According to Health Department source, the dead persons are the inhabitants of Hajipara Area of Doublemooring Thana. Over one hundred persons are still suffering from this disease. Large scale medicinal measures are required to check the spread of this disease. [Text] [Dhaka THE BANGLADESH OBSERVER in English 24 May 84 p 7]

MORE DIARRHEA DEATHS--Narail, May 21--Diarrhoeal disease claimed 200 lives so far in Narail, Lohagara and Khalia Upazilas recently. The disease spread in an epidemic form in different areas and 2,000 persons have so far been attacked with the disease. An official source confirmed the death of 129 persons. At least 49 persons died in Narail sadar; 66 in Lohagara and 14 died in Kalia upazilas during the last few weeks. The local Control Room source said that due to the absence of isolation ward in the hospitals, patients were accommodated on the floor. Shortage of doctors, nurses and other staff and scarcity of saline are the main obstacles to proper treatment of the patients. The Civil Surgeon of Narail said that 39 medical teams were sent to the affected areas. Food crisis, scarcity of pure drinking water are the main causes of the spread of the disease. [Text] [Dhaka THE BANGLADESH OBSERVER in English 23 May 84 p 9]

BRAHMANBARIA CHOLERA CASES--Brahmanbaria, May 30--Cholera claimed five lives and attacked 40 other persons of five villages under Chatalpur union of Nasirnagar upazila recently. The affected villages are Ratanpur, Patair,

Kattalkanda, Kachua and Faharidia. Scarcity of necessary medicines is prevailing in these areas, it is learnt. [Text] [Dhaka THE NEW NATION in English 31 May 84 p 2]

NARAIL DIARRHEA REPORTS--Narail June 1--A total of 9 persons who were attacked with diarrhoeal diseases died of the disease at villages under Lohagara and Boalmari Upazilas recently. The victims were reported to be paralysed, abnormally laughing and died within 24 hours. Being informed of the unnatural disease, the Jessore Civil Surgeon Dr Alimuzzaman rushed to the spot and sent samples of urine, blood and stool of the patients to the Research Institute of Mohakhali with a view to detecting the disease. As a result of this disease the people of the area were panic stricken. [Text] [Dhaka THE BANGLADESH OBSERVER in English 2 Jun 84 p 3]

JHENIDAH CHOLERA DEATHS--Jhenidah, June 2--At least six persons died of cholera and more than hundred are suffering from the disease in three upazilas of the district during the last fortnight. The affected areas are Jhenidah, Kaligani and Moheshpur upazilas. The Civil Surgeon's office confirmed the death and said that preventive and curative measures have been taken to combat the disease. Meanwhile, shortage of saline and other life-saving drug is prevailing in those areas. [Text] [Dhaka THE BANGLADESH OBSERVER in English 4 Jun 84 p 7]

CSO: 5450/0049

BRIEFS

RODENT CONTROL--Local authorities, concerned over the recent growth of the rodent population, will from today start a month-long anti-rodent campaign. The campaign, planned by the ministries of health and agriculture, in conjunction with the Sugar Technologists Association, starts this morning at 9:30 a.m. at Mount Gay and Bromefield, St. Lucy. This action has been prompted by an increase in rat-oriented diseases, and the damages these rodents have been causing to crops. The ministries involved have secured funds that will be used to subsidise the cost of baiting materials (rat poison), purchased during the campaign. Farmers, estate owners, business owners, and householders have been urged to set up bait stations in and around their premises, and householders can obtain rat and mouse bait, free of cost, from the Rodent Control Unit, Ministry of Health, Jemmolts Lane, St. Michael. [Excerpt] [Bridgetown THE NATION in English 28 May 84 p 20]

CSO: 5440/010

BRIEFS

MEASLES OUTBREAK--Maun, 29 Jun--A six-year old child has died and at least seven others have been admitted to the isolation ward in an outbreak of measles here, according to official reports. As a result, the Bonata Primary School was closed more than two weeks ago after advice from health authorities, said Mrs Tuduetso Segosebe, a deputy headteacher. The school will be reopened when the outbreak was contained, she added. Hospital authorities have been urging parents to bring children to hospital for inoculations. They have also advised parents to keep children suspected to have contracted the disease in isolation and to inform health authorities immediately. [Text] [Gaborone BOTSWANA DAILY NEWS in English 2 Jul 84 p 1]

CSO: 5400/157

DOMINICAN REPUBLIC

FINAL VACCINATION CAMPAIGN TO ERADICATE POLIO

Santo Domingo LISTIN DIARIO in Spanish 8 Jun 84 p 1

[Article by Antolin Montas]

[Text] The secretary of state of public health, Amiro Perez Mera, said yesterday that the total elimination of polio from the Dominican Republic is now irreversible.

Perez Mera said that there is no polio left in the Dominican Republic. In order to consolidate this achievement, next weekend there will be a massive campaign to inoculate children 3 years old and younger. He pointed out that this successful eradication of polio was achieved by the vaccination program, using the vaccine developed by the eminent scientist, Albert Sabin.

Perez Mera indicated that the vaccination program will be conducted on a house-by-house basis over the weekend, as it was the last time, and the same personnel will be used. Some changes have been made, based on experience with the previous vaccination program.

In a press conference in which Mejico Angeles Suarez, the campaign's coordinator, also took part, Perez Mera asked mothers of children under the age of 3 not to leave home on Saturday before the vaccinator arrives.

A single application of two drops of the vaccine can make the difference between a normal healthy child and a child who runs the risk of being paralyzed for the rest of his life, he pointed out.

He said that the Dominican Republic today is a model in the world, since outside of the socialist countries, it is "the only developing nation which has managed to totally eradicate polio."

The public health department yesterday began to send the vaccine to the nation's interior. Trucks from the army, from the public health department, and from other state and private organizations left for the provinces yesterday.

A million doses of polio vaccine are available to inoculate approximately 600,000 children, it was reported officially.

The trucks left the public health department starting at 0400 this morning, en route toward La Vega, Salcedo, Santiago, Tenares, Moca, Puerto Plata, Mao, Santiago Rodriguez, and Dajabon.

The polio vaccine was also sent to Nagua, Samana, Bonao, San Francisco de Macoris, Cotui, Bani, Azua, San Juan de la Maguana, and Elias Pina.

Angeles Suarez said that the vaccine was shipped yesterday because they planned to have the vaccine available everywhere it is needed before Saturday. He indicated that the first batch of vaccine and supplies was sent to the interior last Monday.

The public health official said that they had taken all the necessary steps in the capital so that the vaccination program will proceed normally, and they expect a fully successful program, as past vaccination programs have been.

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CSO: 5400/2076

BRIEFS

VACCINATION CAMPAIGN--A vaccination campaign began in the Oio region on the 28th of last month, and will end on 13 June. The campaign was organized by the Base Health Project in that region, working with the Mansoa Health Center. The goal of the campaign, moreover, is to vaccinate all the infants up to 4 years of age against the following diseases: poliomyelitis, measles, tuberculosis, diphtheria, whooping cough and tetanus. This campaign fits within the eight-point program for basic health needs recommended by the WHO to achieve "health for all by the year 2000." [Text] [Bissau NG PINTCHA in Portuguese 6 Jun 84 p 2] 5157

CSO: 5400/149

VACCINATION PROGRAM FOR HEPATITIS B EXTENDED

Hong Kong SOUTH CHINA MORNING POST in English 17 May 84 p 12

[Text]

The vaccination programme against hepatitis B is expected to be extended to all newborn children of carrier mothers in Government institutions and to similar high risk groups in subvented hospital in the long term.

The Director of Medical and Health Services, Dr K.L. Thong, said, in reply to questions raised by Dr Henrietta Ip on the use of the vaccine in the prevention of hepatitis B, the Government spent \$573,000 on vaccine in 1982 and again last year.

A vaccination course for an adult costs \$515, and for a newborn child \$536.

This included hepatitis B immune globulin.

So far, 1,312 people have completed the vaccination course.

Dr Thong also pointed out that a vaccination programme against hepatitis B for the entire population would be impractical as it would involve large sums of money.

Therefore the preferred and realistic method for vaccination as advocated by the World Health Organisation to ensure selective immunisation for risk groups would be introduced.

"It is hoped that in the long term, the vaccination programme will be extended to all newborns of carrier mothers in Government institutions and also to simi-

lar high risk groups in the subvented hospitals," Dr Thong said.

He also noted that a special advisory committee was set up early last year to advise the Government on an overall strategy to immunise certain high risk groups in the community against hepatitis B.

The committee is made up of experts from the Government and the University of Hongkong.

Dr Thong also said two high-risk priority groups had been identified by the committee for a pilot vaccination programme.

The first group consisted of babies born to mothers who were carriers of the disease.

These babies were at high risk of being chronic carriers who were the prime source of infection to the rest of the population later on in childhood and in adult life.

The second group were health care workers who were in frequent contact with blood forms and tissue fluids while working.

The pilot vaccination project was started by the Medical and Health Department in April last year to gather local experience in the use of vaccine and to devise a cost-effective schedule.

Dr Thong explained that the project was designed to screen about 10,000 pregnant women in the Kowloon health region and to vacci-

nate babies born to carrier mothers among this group.

The project also offered vaccination to all health care workers in Government hospitals and clinics who were at risk.

He said the results of the programme would probably be ready for evaluation by the end of this year.

Meanwhile, the Medical and Health Department began a neo-natal screening programme early this year for congenital hypothyroidism to facilitate early diagnosis and medical treatment of infants who might otherwise suffer mental retardation, Dr Thong said.

This phase of the programme, initially designed to cover all newborn babies in Government hospitals and maternity homes, was expected to be completed by July.

The next phase of the programme would begin shortly afterwards, and the department intended inviting subvented and private hospitals as well as maternity homes to participate, he said.

With this co-operation, the programme should be able to cover the entire newborn population, he said.

In reply to Dr Ip's question as to when such neo-natal screening would become available in all Government and subvented hospitals, Dr Thong said the date would depend on the willingness of the hospitals to come and take part.

BRIEFS

DISEASE STATISTICS--The Medical and Health Department has warned of the dangers of cholera, typhoid and dysentery this summer. Food poisoning and viral hepatitis are also common in the warm weather. A spokesman said five people died from viral hepatitis in the first four months of the year. There were 167 cases of viral hepatitis reported in April and 148 in March. Figures for January and February were 92 and 96 respectively. Department statistics shows that reported viral gastrointestinal diseases had been increasing steadily over the past few months. "Though there has been no report of cholera cases in Hong-kong since October 1982, the public should continue to take precautions against the disease which is endemic in Southeast Asia. There were eight reports of cholera, five proved to be imported, in 1982." Meanwhile, the department is continuing its immunisation programmes. But the most effective means of prevention is to observe personal, environmental and food hygiene. Special care should be taken in eating as most gastrointestinal diseases are transmitted through contaminated food and drink. All food should be thoroughly cooked and should not be left uncovered if it is not eaten immediately. He also said that water directly from the mains was safe for drinking, but water from tanks could be contaminated and should be boiled. "Water from streams and wells is not suitable for drinking." [Text] [Hong Kong SOUTH CHINA MORNING POST in English 11 Jun 84 p 12]

CSO: 5440/009

OFFICIALS REPORT BENGAL EPIDEMIC UNDER CONTROL

Bombay THE TIMES OF INDIA in English 4 Jun 84 p 21

[Text] New Delhi, June 3: Shiga-1, the deadly toxic germ that has killed as many as 2,947 persons since March in West Bengal, has been contained and there is no fear of spread of the disease, an acute form of dysentery, health ministry officials claim.

Prompt alert issued by the ministry to other states enabled them to take precautionary steps. The surveillance mechanism has been effective, they say.

Apart from West Bengal, the only other states with affliction in large numbers are Assam and Tripura, where the number of fatalities was comparatively small.

In the calendar of public health in India, May-September is the season of diarrhoeal diseases, the incidence of which has, according to official figures, declined from 8.7 million in 1978 to less than one million last year.

Senior officials maintain that there is no report of a rise in incidence in any of the northern states or any other region in the country.

Medicine-Resistant

A peculiar feature of the disease that struck West Bengal this year (87,998 cases) was that it proved resistant to the medicine normally administered to patients, because of the high toxic nature of the germ.

Supplies of more effective medicines, cotrimaxazole and centamycin in other parts of the country, had to be mobilised to control the disease.

In the view of the officials, the programme of distribution of oral rehydration salts, chlorination of wells and spraying of bleaching powder have brought down the incidence in other states.

In towns with filtered water supply and better sanitation the incidence is far less. For prevention of diarrhoea, the officials have prescribed the following: use safe water for drinking and cooking purposes; avoid contamination of water sources; boil the water, if the source is doubtful; keep food and drinking water in clean utensils and keep them covered; always wash hands well with soap and water (1) before eating and (2) before giving food to the child; keep the nails short and clean, and take freshly prepared food or heat the earlier prepared food before eating; and always avoid stale food.

BRIEFS

KARNATAKA CHOLERA CASES--(PTI)--Five people died of suspected cholera and 100 others were being treated at government hospitals and private nursing homes, Dr Srinivasan, government medical officer, said in Sirsi, North Kannada, on Monday. Prompt measures, including inoculation have been taken to counter the sudden outburst and there is no cause for panic, Dr Srinivasan said. [Text] [Bombay THE TIMES OF INDIA in English 16 May 84 p 14]

DYSENTERY IN HIMACHAL PRADESH--Simla, May 22 (UNI)--Dysentery has so far claimed 22 lives in Simla and Kangra districts of Himachal Pradesh. An official spokesman told UNI here today that eleven deaths each had been reported from these districts. Most of the victims were children, he said. Besides more than 100 patients were undergoing treatment for dysentery in different places in these districts. Medical teams, carrying medicines and oral rehydration therapy powder, had rushed to the affected villages, he said. [Text] [New Delhi PATRIOT in English 23 May 84 p 6]

NAGPUR JAUNDICE STATISTICS--Nagpur, June 1--At least 50 people have died of jaundice in Nagpur city since the beginning of this year, according to the superintendent of the government medical college here, Dr K. Bhonsale. While the dean of the college, Dr B.S. Choube, maintains that there is no evidence that the killer hepatitis B virus was responsible for any death, a doctor related to a girl who died of jaundice in hospital on May 9 says she was a victim of the virus. The girl, Liza Gunvani Soni, who was about three years old, had visited Ahmedabad about three months before she died. The virus, whose incubation period varies between 45 and 145 days, was prevalent in that city at the time. Moreover, 263 of the 463 donations received by the blood bank in the last two months had been screened for hepatitis B and in one case the test was positive, Dr Bhonsale said. However, Dr Choube said two people who were infected with viral hepatitis were isolated but a test conducted on them showed they were struck by the less lethal hepatitis A. While Dr Choube says the hospital authorities are taking all precautions to maintain proper hygiene, learning that children had found 12 antique idols while digging. Seven idols of Devi one Shivaling, a Nandi and one Kodadhari were found. [Text] [Bombay THE TIMES OF INDIA in English 2 Jun 84 p 5]

BENGAL DYSENTERY TOLL--Mr R. Swami, Director of the Indian Council of Medical Research, met the State Health Minister in Calcutta on Saturday to ascertain the steps taken by the State Government to check the spread of bacillary dysentery. Mr Ambarish Mukherjee, the Health Minister, requested Mr Swami to

impress on the Union Health Minister the need for tackling the disease on a national level. Bacillary dysentery and gastroenteritis diseases had till now claimed 2,194 lives in West Bengal, while 77,310 people had been afflicted. Mr Mukherjee added that a meeting on the disease and the steps against it would be held with experts from the medical colleges of Burdwan, Bankura and North Bengal next week. [Text] [Calcutta THE SUNDAY STATESMAN in English 3 Jun 84 p 12]

DYSENTERY BACTERIA TYPES--New Delhi, June 9 (PTI)--The virulent form of dysentery which attacked different states in the country was not caused by the same strain of bacteria, according to the recent findings of the National Institute of Cholera and Enteric Diseases, Calcutta. In West Bengal, the strain "shigella dysenteriae type one" was responsible for the epidemic, while in Orissa it was "shigella flexneri type three." Quoting the study of the institutes ICMR scientists said that "shigella flexneri type three" attacks were less severe than "shigella dysenteriae type one." But both the strains were resistant to commonly used anti-biotics, they said. Pointing out that poor sanitation helps the infection to spread, the ICMR scientists said that it would take at least a year to fully control the epidemic. One common finding of the institute was that the disease bearing a variety of bacteria made children into ten years "favourite prey." Ninety-five percent of the victims were below the age of five. They also found that the carriage of transmissible factors by "shigella" strains was responsible for the therapeutic nonsusceptibility of various antibiotic drugs, the scientists said. [Text] [Bombay THE TIMES OF INDIA in English 10 Jun 84 p 7]

CHOLERA INFECTED AREA--UNI--The collector, Mr P.P. Godshelwar on Friday declared the area within the jurisdiction of Nagpur municipal corporation as a "cholera-infected" area. [Text] [Bombay THE TIMES OF INDIA in English 10 Jun 84 p 7]

ENCEPHALITIS IN SOUTH ARCOT--(UNI)--Brain fever (encephalitis) has taken a toll of 14 lives in South Arcot district since January. In all, 38 cases were reported. In Tittakudi alone, of the nine cases reported last week, six proved fatal. Mr Fiaz Piran, regional assistant director, public health, told newsmen on Saturday. He said brain fever would be prevalent during September-December. But this year, its incidence now seemed to be unusual due to the untimely rain. [Text] [Bombay THE TIMES OF INDIA in English 9 Jun 84 p 21]

GUJARAT JAUNDICE TOLL--Ahmedabad, June 8--Seven more hepatitis deaths were reported from the city hospitals yesterday. With this, the death-roll due to jaundice has risen to 404. Of the latest deaths, three were reported from the infectious diseases hospital and two each from civil and Vadilal Sarabhai hospitals. According to a spokesman of the city municipal corporation, with 22 admissions yesterday, there were 116 patients under treatment. Meanwhile, the health department of the civic body raided an unauthorised aerated bottling factory in the Jamalpur area and destroyed 1,560 bottles of aerated water. The factory was closed down. The health staff also destroyed 261 kg of eatables, issued notices to 23 restaurants and hotels and inspected 59 dispensaries. Cases were also filed against five people today for violation of health rules. According to an official report, nearly 60 percent of the staff members of the civil hospital are susceptible to hepatitis. This was revealed after examination of blood samples by the National Institute of Virology. [Text] [Bombay THE TIMES OF INDIA in English 9 Jun 84 p 13]

INDONESIA

BRIEFS

CHOLERA OUTBREAK--AT least 20 people have died and 322 others were being treated in 2 hospitals following a wave of cholera since the beginning of this month in the North Sumatera town of Banda Aceh, SINAR HARAPAN reported Tuesday. [26 June] The paper said it was the worst outbreak of the disease during the past 12 years. In 1972, some 300 people died and 1,600 others were sent to hospitals with the disease. [Excerpt] [Jakarta JAKARTA POST in English 27 Jun 84 p 3 BK]

CSO: 5400/4434

NATIONAL SURVEY TO STUDY INCIDENCE OF AIDS VIRUS

Kingston THE DAILY GLEANER in English 15 Jun 84 p 2

[Text]

An islandwide survey is to be launched by University Hospital Department of Pathology to find out the prevalence in Jamaica of a cancer-causing virus that causes Acquired Immune Deficiency Syndrome (AIDS) which killed some 1,758 people since its appearance in the United States three years ago.

According to Dr. Nigel Gibbs the Head of the department, and principal investigator in collaboration with the National Cancer Institute, Bethesda, Maryland, Dr. Wycliff Lofters, Dr. Marie Campbell, Dr. Barry Henchard and Dr. Lois LaGranade, both AIDS and cancer of the lymph node, a disease called Lymphoma, are caused by the same virus, HTCV - Human T-Cell Leukemia lymphoma virus.

Indicating that he did not "want the story to cause any panic" Dr. Gibbs said that the Department was going to launch an islandwide survey to find out what is the prevalence of

the virus in Jamaica and what causes the small number of about five per cent of the population that has the virus infection to develop cancer.

The Department collaborated in 1982 with Dr. Robert Gallo, Dr. Williams Blattner, Dr. Nigel Gibbs and Dr. Marie Campbell on the epidemiology of the virus in Jamaica and they have found that there is "a high prevalence" of the virus infection in patients who have had lymphoma and results confirm that there is a connection between this virus and the cancer-causing virus.

According to Dr. Gibbs the department has been trying to find out if the virus is endemic in Jamaica, what causes people to be infected by the virus and what increases the risk of people getting infected by the virus.

From 1969 the Department has been studying the disease, lymphoma.

CSO: 5440/013

BRIEFS

MENINGITIS, MEASLES CASES--Irbid (J.T.)—Meningitis has spread in the Irbid Governorate over the past three weeks, according to the director of the Princess Basma Hospital here, Abdul Hafiz Momani. He said that cases of meningitis are still arriving at the hospital and most of the patients are children. The hospital has to date successfully treated seven children and two more are still receiving treatment, Dr. Momani said. He appealed to the authorities to launch a vaccination campaign against the disease and to offer protection to people, especially children. The hospital has also recently received increased numbers of measles sufferers which also tends to affect children in general, Dr. Momani said. He urged the public to seek medical help as soon as they detect the symptoms of any of these diseases among their children and to avoid the complications that might lead to death. Health Minister Kamel Ajlouni paid a surprise visit to the hospital Sunday and inspected the services offered to the sick children. He was also briefed by Dr. Momani on the hospital's needs and problems. [Text] [Amman JORDAN TIMES in English 12 Jun 84 p 3]

CSO: 5400/4522

MALARIA CONTINUING PROBLEM IN SARAWAK

Kuala Belait BORNEO BULLETIN in English 2 Jun 84 p 24

[Text]

KUCHING. — Dramatic successes in Sarawak's war against malaria — and the amount of work still to be done — were highlighted at a conference here late last month.

The main enemy has been beaten, with the number of malaria cases reported each year down from 40,000 a couple of decades ago to fewer than 1,000 today.

But further victories are going to be harder to achieve because most cases are now in remote interior areas where medical facilities are inadequate, and

along the border with Kalimantan.

The conference, with officials from Sarawak, Kalimantan and Sabah taking part, was aimed at reducing border cases, in particular through co-ordinated campaigns.

The meeting was opened by the Assistant Minister for Works and Public Utilities, Encik Robert Jacob Rindu, who highlighted one of the main reasons for recent successes against malaria.

While better govern-

ment organisation and the support of the World Health Organisation were important, he said, participation of the border communities also plays its part.

In malarial areas government control teams no longer have to cope with a lack of co-operation or even hostile competition, from the local people as the teams go about spraying houses.

In the past rumours spread that the DDT being used to kill malarial mosq-

uitoes did more harm than good, killing cats and so causing a plague of rats.

In Sabah there was even a rumour about cattle licking DDT off recently sprayed walls and then dropping dead.

The state Agriculture Department, alarmed at the effects such rumours were having and perhaps apprehensive that there might be some truth in them, decided to investigate.

A cow was sprayed with an ounce of DDT, to see what would happen. Nothing did and the rumour died.

CSO: 5400/4431

SABAH REPORTS NEW CHOLERA CASES

Kuala Lumpur NEW STRAITS TIMES in English 12 Jun 84 p 12

[Text]

KOTA KINABALU, Mon. — Sabah's first two cholera cases this year were reported last week, the State Medical Services Department said today.

The month-old girl victim from Kampung Pulau Gaya here and the 2½-year-old boy from Pulau Sabang were confirmed positive on July 9 and 10 respectively.

However, according to the department's director, Dr Mechiel K.C. Chan, the girl, who had been undergoing treatment at the Queen Elizabeth Hospital from June 4, was taken home three days later by her mother without the hospital's knowledge.

The department advised the parents to return the girl, Nursidah Abdul Pilih, to the hospital for the complete course of treatment to prevent any spread of the infectious disease in the community.

The hospital failed to trace the girl because the address given was not complete, Dr. Chan said.

The other patient is currently undergoing treatment at the hospital.

Meanwhile, medical officers and other health personnel have been alerted to take prompt therapeutic and preventive measures in all cases of gastro-enteritis.

Hygiene

Dr. Chan urged the public to observe strict personal hygiene and refrain from drinking unboiled water and eating uncooked food.

He also called on the public to minimise movement to and from the infected areas.

"Residents in the affected areas are urged to cooperate fully with the public health investigating teams by supplying the required information pertaining to all cases of diarrhoea.

"They should not be unduly alarmed as the medical department is doing all it can, with the help of the public, to prevent any further spread of the disease," Dr. Chan said. — Bernama

CSO: 5400/4431

DENGUE, CHOLERA ALERT IN JOHORE

Kuala Lumpur NEW STRAITS TIMES in English 14 Jun 84 p 10

[Text]

JOHORE BARU, Wed.
— Johore has been placed on alert for any possible dengue, dengue haemorrhagic fever (dhf) or cholera outbreak in view of the forthcoming dry season.

Directives and circulars have been sent to all doctors and medical officers in the State to be vigilant.

State Medical and Health Services Director, Dr Ahmad Shah Syed, said precautionary measures would be taken to prevent a major outbreak of any of the diseases.

He told *Bernama* that medical officers had been ordered to get wells chlorinated and food hygiene stepped up in the State.

Dr Ahmad Shah said his department would make regular spot

checks on stalls, restaurants and other food premises to ensure foodstuff sold were covered and germ-free.

The department was also stepping up health programmes to instil in the people the importance of personal hygiene.

Talks and demonstrations would be held to inform the people of the dangers of such diseases.

Dr Ahmad Shah advised the public to report immediately any cases of diarrhoea to the nearest hospital or health clinic.

Apart from four dengue cases reported early this year, there had been no cases for the past three months.

No cholera cases had been detected so far this year in Johore. — *Bernama*

CSO: 5400/4431

PEOPLE'S REPUBLIC OF CHINA

BEIJING TO TOUGHEN MARKET HYGIENE CONTROL

OW271312 Beijing XINHUA in English 1259 GMT 27 Jun 84

[Text] Beijing, 27 Jun (XINHUA)--Beijing authorities are bringing in tougher controls on food hygiene at the growing number of peasant markets in the capital.

New regulations adopted today at the 13th session of the eighth Standing Committee of the Beijing Municipal People's Congress will come into effect on 1 August. They require peasant traders to take various measures to ensure food hygiene. Fines of up to 30,000 yuan can be imposed if the regulations are violated.

Under the new rules, people cooking and selling food on peasant markets must have a yearly health check and get a health certificate.

The sale of all putrid food, dead eels, dead crabs, bulk cold drink and other unhealthy products is banned. Raw food must be separated from cooked, and dust and flies must be kept away to prevent contamination. Tableware, tea sets, food containers and packing materials must be disinfected before being used, and utensils must be kept clean at all times.

The regulations also stipulate that food stalls must be set up in clean places, and that traders have a duty to keep the environment clean.

At today's meeting, Vice Mayor Bai Jiefu said similar regulations made in 1981 were too simple to tackle the current situation.

The policy of revitalizing the economy had led to the growth of more than 130 peasant markets in and around the city in recent years. These attracted hundreds of thousands of customers every day.

Bai said that to ensure the implementation of the new rules a special administrative body would be formed. More than 400 medical personnel from hospitals would join the 240 food hygiene supervisors in the city.

CSO: 5400/4148

PEOPLE'S REPUBLIC OF CHINA

PRC MAKES PROGRESS IN ENDEMIC DISEASE CONTROL

OW231610 Beijing XINHUA in English 1030 GMT 23 Dec 83

[Text] Beijing, 23 Dec (XINHUA)--All five million victims of filariasis (elephant foot) in Shandong Province at the time of the founding of the People's Republic have been cured. A recent national conference announced the complete wiping out of filariasis in that province.

This is only one of the achievements of People's China in stamping out endemic diseases. The Public Health Ministry disclosed that great headway has also been made against schistosomiasis (snail fever) and kaschin-beck's disease.

Public Health Minister Cui Yueli reiterated at the conference the government's stand of putting great emphasis, including spending a considerable portion of its resources and manpower, on tackling endemic and common epidemic diseases.

There is a complete anti-epidemic network reaching out to every commune. Special anti-epidemics stations have been set up in 3,271 places employing 400,000 professionals.

As a result elephant foot has been wiped out in 265 counties by the end of 1981. A typical example is the Guwei village, Zouxian County in Shandong Province where half the villagers were once afflicted with the disease in the early 1950's. The 57-year-old peasant Zheng Chengfu is expected to earn over 1,000 yuan in cash this year, but who would believe that this vigorous man could hardly walk in those days.

The number of snail fever victims dropped from over 10 million on the eve of the founding of the People's Republic to the present 2.5 million. In the same period, lepers dwindled from 500,000 to the present 200,000 and malaria patients from 30 million to the present 3 million.

Systematic plans have been worked out on other chronic diseases such as TB, goiter, and kaschin-beck's disease. Occupational diseases have also been effectively dealt with.

A survey completed this year on kaschin-beck disease, which involved examinations of tens of thousands of children and thousands of sample tests of blood and urine, showed one of the basic causes of the disease selenium deficiency in the diet. Now, medical personnel have been adding selenium to the patients' food or are changing their diet.

Many epidemics are spread by mosquitos, flies and snails. Hence, the government is paying great attention to nation-wide public health campaign. Qingpu County around Shanghai is perhaps the latest addition to the list of counties in China that have reported the wiping out of snail fever by killing the snails, host for schistosome.

During the public health campaign in the countryside drinking water and lavatories are the two focal points. This year, 350 million peasants, or 40 percent of the total rural population are drinking water out of taps or deep wells.

CSO: 5400/4146

PEOPLE'S REPUBLIC OF CHINA

HENAN MAKES HEADWAY IN ENDEMIC DISEASE CONTROL

OW260326 Beijing XINHUA in English 0246 GMT 26 May 84

[Text] Zhengzhou, 25 May (XINHUA)--Cases of endemic goiter in Henan Province dropped from two million in 1980 to 500,000 in 1983, according to Yang Longhe, director of the provincial public health department.

Yang said that endemic goiter and fluorosis, two major endemic diseases in the province, used to affect a large proportion of the population in the olden days.

In order to control endemic goiter, Henan has expanded its production of iodated salt, by constructing 20 iodated salt plants since 1981, bringing the total to 68. These plants now produce 155,000 tons of iodated salt annually, ensuring an adequate supply for all the 20 million people in areas threatened by the disease. The province has also set up 3,775 stations to inspect the quality of iodated salt and prevent non-iodated salt from entering those regions. In addition, public health departments have injected salt with iodipin in some areas. At present, 47 of the 66 counties and cities that were affected by the disease have managed to control outbreaks of endemic goiter.

The director said that surveys in 1982 and 1983 indicated that 4,700 villages needed to improve water quality for prevention and cure of fluorosis. Therefore, in the past 2 years the provincial and local governments have invested more than 6 million yuan on 289 projects to bring low fluorine water to 303 villages.

The provincial government has strengthened its epidemic disease control measures also by increasing the number of field stations from 39 to 86, and the number of trained personnel from 68 to 170 since 1981.

CSO: 5400/4146

PEOPLE'S REPUBLIC OF CHINA

BRIEFS

VACCINATION STORAGE SYSTEM--Beijing, 7 Jul (XINHUA)--A cold storage and transport system, set up in Hubei in central China by the United Nations Children's Fund (UNICEF) and the provincial authorities, has eased the task of vaccinating children there and reduced the incidence of some major pediatric diseases. According to the national newspaper, HEALTH NEWS, the system, called "cold chain," has reached more than 1.4 million children below the age of seven in 25 cities and counties in Hubei. The experiment, says the newspaper, has reduced the incidence of diphtheria from 0.11 to 0.04 per 100,000 people, whooping cough from 32.99 to 10.84, and measles from 118.31 to 62.29, as compared with 1979. Children are provided with free vaccination in China. But some rural and remote areas lacking cold storage equipment can only vaccinate in winter because vaccines often deteriorate in hot weather. [Text] [OW090631 Beijing XINHUA in English 0817 GMT 7 Jul 84 OW]

CSO: 5400/4149

'DEADLY' DISEASES REPORTED IN SQUATTER AREAS

Manila BULLETIN TODAY in English 2 Jul 84 pp 1, 14

[Article by Jun Ramirez]

[Text]

Deadly viruses, spawned by a dirty environment, continue to bring death to squatter families in Manila.

Manila City Health Officer Evangeline Suva reported yesterday that a total of 41 persons, mostly children, died last week from various illnesses caused mainly by poor sanitation.

Suva said the leading killer was pneumonia, which killed 33 children last week and 32 others in the previous week.

She said that unless sanitation procedures are improved, such as the prompt and systematic collection of garbage, the death toll will persist if not rise.

Suva said garbage piles are favorite breeding grounds of germ-carrying insects such as flies and mosquitos.

Germs can easily contaminate rainwater seeping through squatter shanties, she said.

Last week also, Suva said 152 youngsters were afflicted with gastroenteritis, but only one died; 22 persons contracted measles and five died; and 17 others died of tuberculosis.

Many people can no longer afford to buy and eat nutritious foods as a result of increasing prices, thus weakening their resistance to highly communicable diseases, she said.

Meanwhile, Acting Manila Mayor James G. Barbers will conduct starting today an all-out offensive against market vendors using tampered weighing scales.

Barbers said special teams will be fielded in public markets, groceries, and other retail outlets.

CSO: 5400/4335

NEED TO CONTROL RABIES FOUND 'URGENT'

Manila BULLETIN TODAY in English 19 Jul 84 pp 1, 10

[Article by M. Mangahas]

[Text]

The Philippines, Thailand, and Sri Lanka are the countries with the highest incidence of rabies and deaths due to rabies among men and animals.

This was cited by speakers at the 12th national convention of the Veterinary Practitioners Association of the Philippines (VPAP) last week as they all urged the implementation of a national program to monitor, control, and eradicate rabies.

Dr. Enrique T. Carlos said that rabies, a viral disease of warm-blooded animals, results from ecological imbalance and poor sanitation and hygiene.

He said that in the Philippines, 97 per cent of all rabies cases are contracted through dogs. Of all rabid dogs, he said 75 per cent contain the virus

in their saliva, making for easy transmission.

Carlos said the rabies virus is transmitted when a dog licks a person with a wound or any opening in the skin, and may be fatal in 10-14 days.

Since 1969, the need for a nationwide program to eradicate rabies has been cited by veterinary practitioners and government health officials but no such program has been fully implemented since then, Carlos said.

The Metro Manila Commission, according to him, vaccinates some 1,500 dogs monthly but Carlos said no attention has been given to the surveillance and capture of stray dogs, which are the main carriers of the virus. Until a few years ago, the Manila city government dispatched team to impound and vaccinate stray dogs.

This year alone, Carlos said the Bureau of Animal Industry reported 33 cases of rabies from January to April.

Dr. Bonifacio Dazo, veterinarian of the World Health Organization office in Manila, said rabies is a serious public health problem which, unfortunately, no private or government agency has taken responsibility for.

Dazo said WHO is concerned about the problem because of its serious effect on human life.

In September, 1983, the WHO meeting on rabies held in Geneva, Switzerland, stressed that since dogs remain the main source of rabies in 90 countries in the world, rabies control through vaccination of dogs should be undertaken, Dazo said.

Other carriers of rabies are cats, bats, cows, horses, foxes, rats, and generally all warm-blooded animals.

The WHO has also recommended the formation of a national committee to draft and implement a rabies eradication program.

Dr. Metodio Palaypay of the University of the Philippines Health Center said that rabies continues to be a common problem of people from low-income groups who are more exposed to stray dogs carrying the virus.

However, he said that traditional treatment of the disease includes a series of at least 25 injections of local vaccines costing P3,000 before the devaluation last October.

Palaypay said that to most low-income patients, the unfortunate choice is between paying P3,000 in vaccinations or P4,000 for a coffin, adding that rabies, if not treated immediately, will surely lead to the patient's death in 10 days.

The VPAP convention was held June 14-15 at the Hotel Intercontinental in Makati with some 100 delegates from various provinces. The convention committee was co-chaired by Doctors Gabby Paz and Eric Sarmiento.

WORRISOME RISE IN TUBERCULOSIS CASES NOTED

Lisbon A TARDE in Portuguese 1 Jun 84 p 13

/Article by Adulcino Silva/

/Excerpts/ Seventy out of every 100,000 Portuguese have tuberculosis, and nearly 500 died last year as victims of *Mycobacterium tuberculosis*. In 1983, out of the 130,566 persons examined in hospitals and in antituberculosis clinics, 6,834 new cases of tuberculosis were detected. In the district of Lisbon alone, which has the highest incidence, 2,103 cases were recorded. This figure, however, may be revised later as it is still provisional. In the Greater Lisbon area, the incidence of tuberculosis is 106 for every 100,000 inhabitants. Causes include sociological changes noted in recent years, lack of hygiene, deteriorated housing and new housing projects with small units, stress and poor diet.

There are many minor causes of tuberculosis, such as diseases contracted which lead to a weakening or reduction of the body's defensive mechanisms. The epidemiological situation in Portugal, according to Dr Leal Goncalves, "is no reason to panic," but he does admit that "the situation is bad."

The people most affected by the tuberculum bacillus range in age between 19 and 30 years, or are older than 45 years, and the geographical areas with the highest number of cases are Lisbon, Setubal and Porto.

Lack of Hygiene

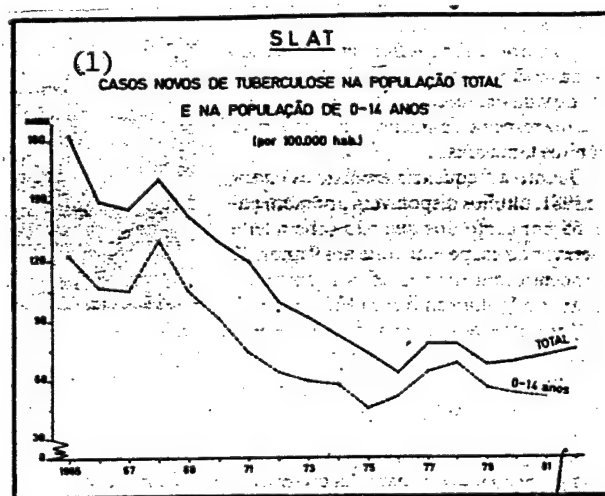
In Dr Leal Goncalves' view, poor housing and nutrition, coupled with the lack of hygiene, are the main causes of the disease. According to this physician, "the labor force heads for the cities to obtain better wages and lives in deteriorated housing (frequently without the minimum requirements), for economic reasons, or settles in modern housing (at high prices), but in very small, poorly divided units. Since people spend, on average, 12 to 13 out of every 24 hours at home, it is much easier to catch an infectious disease when living in a small unit, such as those now being built in the large heavily populated areas in the country." The high illiteracy level and stress are other factors to

consider, according to Dr Goncalves, who explained that "out of every 100 new patients, there are 7 cases of tuberculosis." If these figures do not give reason to panic, they do at least give cause for concern.

Neglect

Another factor of which the public is not aware but which, in the opinion of Dr Leal Goncalves, has influenced the increase in new cases of tuberculosis in Portugal, particularly in 1981-82, is the fact that "the people, doctors and schools of medicine 'somewhat neglected' tuberculosis because of the appearance of new drugs." In those 2 years, 7,249 and 7,309 new cases appeared, respectively. In Sta Maria Hospital in Lisbon alone, there were 462 cases of tuberculosis, 99 of which were pulmonary. In that same year, the mortality rate attributed to tuberculosis declined from 16.08 percent to 14.38 percent (from the clinical files).

In the opinion of Dr Jose Cabral (whose paper on phthisiology enjoys tremendous prestige), "the indices for total incidence of tuberculosis, 60 to 70 new cases per year for every 100,000 inhabitants, and the incidence of pulmonary bacillar tuberculosis (20 to 30 cases), are still very high."



A graph showing the evolution of tuberculosis in Portugal from 1965 to 1981, provided to our newspaper by SLAT.

Key: 1. New cases of tuberculosis in the total population and in the population from 0-14 years (per 100,000 inhabitants)

9805

CSO: 5300/2521

PORTUGAL

BRIEFS

CONFIRMED AIDS CASE--An AIDS case has been confirmed for the first time in Portuguese hospitals. The disease was detected late last year in a civil servant from Cape Verde, who was hospitalized in Lisbon. The diagnosis was made in November 1983 and was later confirmed in Paris. One of the physicians who followed the patient stated to the NOTICIAS DE PORTUGAL news agency that "both now and in the past, we have suspected the incidence of AIDS, but to date, this is the only case that could be confirmed." Meanwhile, two other cases of AIDS are suspected, according to a diagnosis made last week by a group of physicians at the Curry Cabral Hospital. [Excerpt] [Lisbon EXPRESSO in Portuguese 7 Jul 84 p 1]

CSO: 5400/2535

MALARIA CASES INCREASE

Honiara SOLOMON STAR in English 29 Jun 84 pp 8, 9

[Text]

The Australian High Commissioner, Mr Trevor Sofield, last week, gave to the Ministry of Health and Medical Services a total of 134400 paludrin tablets contained in six boxes.

The tablets were provided under the Defence Co-operation Program between Australia and Solomon Islands.

The Chief Pharmacist, Mr Tony Harris received the medicine from Mr. Sofield who said he supported the current anti-malaria campaign being carried out in north Guadalcanal.

The Australian Army had developed a great deal of expertise in the fight against malaria in civil assistance programs in many countries.

Mr Sofield said the Australian Army had given the tablets because they also support the malaria campaign.

Around the world, two and half million people died by malaria last year.

In Guadalcanal alone last year, 45,000 cases of malaria had been recorded; 82,000 cases were recorded in the whole of Solomon Islands last year; and for the first three months of this year, 20,000 had been reported.

Up to 85 percent of children between 2 to 9 years in many villages had contracted the disease.

The increase number of malaria cases in the country has shown that a dangerous epidemic of

malaria had developed.

Before handing over the tablets to Mr Harris, Mr. Sofield said "I am very pleased to see that Solomon Islands has not succumbed to a dangerous resignation to the disease, but has combined to try and break its cycle.

"I'm impressed by the logistics involved in this exercise", he said.

"Whilst the impetus for the campaign had come from the World Health Organisation and the Solomon Islands Ministry of Health, everyone agreed that without the hundreds of volunteers and, indeed, the co-operation of all the people on the island, the campaign could not have got off the ground," Mr Sofield said.

CSO: 5400/4436

BRIEFS

GASTROENTERITIS OUTBREAK--There has been an outbreak of gastroenteritis in Dennery and according to the Ministry of Health, one death has so far been reported. The latest Ministry newsletter said that health workers in the village are concerned over the number of "gastro" cases being seen at the Dennery Hospital. The newsletter said that 137 cases had been reported during last month, compared with 15 in March. It added that 60 percent of the reported cases were from the Dennery village. The remaining 40 percent were from the neighbouring communities of La Resource, Richfond and surrounding areas. Of the cases reported 46 percent were in children under two years of age. Another 25 percent in the two to five year age group, and the remainder (29) percent were in patients between 5 and 60 years old. According to the newsletter six cases were admitted at the village hospital. [Text]
[Castries THE VOICE in English 23 May 84 p 7]

CSO: 5440/014

UPPER VOLTA

BRIEFS

CHOLERA OUTBREAK--There has been an outbreak of cholera in the northern part of Upper Volta and in 30 areas of Niger just across the border. According to Radio Ouagadougou, about 19 persons have died from the epidemic. The radio said a team of health workers have been sent to the affected areas to remedy the situation. It said the WHO has brought in vaccines and drugs to combat the disease, which is reportedly killing several persons daily. [Text] [AB032005 Monrovia Domestic Service in English 1900 GMT 3 Jul 84]

CSO: 5400/150

VILLAGERS HELP BEAT BILHARZIA

Harare THE SUNDAY MAIL in English 1 Jul 84 p 1

[Text] A community self-help project involving villagers in Chiweshe has cut the incidence of bilharzia among schoolchildren in the area by more than half in just 18 months.

So successful is the project that the University of Zimbabwe researcher who launched it might extend it to rural areas throughout the country.

The strategy, explained Dr Sam Tswana of the department of medical microbiology of the Faculty of Medicine last week, concentrated on the provision of clean water, treating the victims, destroying the bilharzia host snails and educating the villagers about how to control the spread of the disease.

Chiweshe--where Dr Tswana's team reduced the prevalence of bilharzia among schoolchildren from 78 percent to a mere 30 percent--was chosen because it is part of Mashonaland, a province where an estimated four-fifths of children of school-going age suffer from bilharzia because they lack the necessary education to prevent transmission of the organism. Chiweshe is also close to his base, the Harare medical school.

Grant

A similar exercise in Gokwe places emphasis on educating the people and with a grant from the World Health Organisation they have fenced off boreholes to protect them from animals and rebuilt dams which now provide water throughout the year.

Dr Tswana told THE SUNDAY MAIL: "The study in Gokwe benefits the community because the WHO grant is geared towards educating them. What I did with the people was to say to them that I could provide them with the materials if they could provide labour.

His work in Gokwe now involves teaching pupils how to prevent the spread of bilharzia. "The pupils are the ones who can spread this knowledge within their communities."

CSO: 5400/157

URGENT MEASURES TO CURB FOOT-AND-MOUTH DISEASE

AU101326 Sofia BTA in English 1259 GMT 10 Jul 84

["An Urgent Preventive Measure"—BTA headline]

[Text] Sofia, 10 Jul (BTA)—Bulgaria has been notified by the European (?Commission) for Foot-and-Mouth (FAM) Disease Control that cases of F.A.M. disease have been registered in the region surrounding the Maritsa Delta.

In this connection the Bulgarian veterinary authorities have demanded for the cars transitting Bulgaria and entering this country through the Kapitan Andreevo and Malko Turnovo checkpoints to be escorted until they leave Bulgaria.

This is a temporary preventive measure in order to avert the danger of spreading the disease both in Bulgaria and in Europe. Its aim is to confine the motor vehicle traffic transitting Bulgaria to the motorways. In the opposite direction this measure is not administered.

Along with this urgent measure the Bulgarian veterinary authorities have started vaccinating the animals in the restricted sanitary area (tampon zone) in the southern border regions with a special "Asia 1" vaccine sent by the FAO.

The step taken by the Bulgarian authorities is in conformity with the decision adopted at the 46th session of the Executive Committee of the European F.A.M. Disease Control Commission with the FAO held in Bonn in April 1984 in connection with the epizootic situation in the Middle East.

It is the duty of the Bulgarian veterinary control and quarantine authorities to subject the people, motor vehicles and goods entering Bulgaria to strict sanitary inspection and to disinfect all motor vehicles driving into this country.

The efficient organization of the work of the Bulgarian veterinary authorities has earned them international recognition for setting up an insurmountable barrier against epizootic diseases which give trouble on international scale.

CSO: 5400/3009

CAMPAIGN TO COMBAT RINDERPEST UNDERWAY

Conakry HOROYA in French 17 May 84 p 6

[Article by N'Famory Kaba: "The Fight Against Rinderpest in Guinea"]

[Text] The Ministry of Livestock-Raising and Fishing will launch, starting on 1 June 1984, a major campaign against rinderpest throughout the national territory.

This campaign falls within the framework of the agreements signed between our country and the FAO for the total eradication of this epidemic. Because Guinea has cattle belonging to the N'Dama trypanotolerant cattle breed, it has authorized enormous financial relief through aid projects from PNUD/FAO GUI 74/021 and GUI 78/012, to protect the country against rinderpest, the last outbreak dating from 1971. This made it possible to introduce protective measures along the borders and at the same time to equip the quarantine stations with means of transportation and produce different bacterial and viral vaccines in the laboratory in Kindia.

The World Bank project, which was supposed to continue the activities related to animal health, was interrupted, and the government is encountering more and more difficulties in confronting not only the expenses inherent in carrying out the vaccination campaign of young calves but also in purchasing raw materials and material necessary for making rinderpest vaccine while following the FAO/OIE/OMS production norms.

The manufacture of tissue vaccine against rinderpest has been stopped until the Kindia veterinary laboratory can be put back in working order.

Also, taking into account the flare-up of rinderpest in the bordering countries of Mali, Ivory Coast and Senegal, Guinea has asked for aid from the Technical Cooperation Program (PCT) of the FAO.

This FAO assistance has as its objective to make it possible for the Kindia veterinary laboratory to produce not only tissue vaccine against rinderpest, but also to help the veterinary service to initiate an anti-rinderpest vaccination campaign on the borders between Guinea and its neighbors Mali, Ivory Coast and Senegal, and surveillance of the movements of commercial and migratory cattle; then formulate a plan covering the Guinean part of the Pan-African campaign against rinderpest.

To carry out these projects, the FAO will send a mechanical engineer specialized in laboratory materials who will aid the Guinean personnel in setting up the equipment furnished by the PCT project (one month and a half); then a virologist who will be present during installation of the lab equipment and will begin manufacturing vaccine and will train the Guinean veterinarians in manufacturing techniques (four months.)

Furthermore, the FAO will furnish equipment including laboratory equipment and means of transport, as well as general expenses for financing the work.

The Ministry of Livestock-Raising and Fishing is responsible for carrying out the projects.

The government's contributions will notably include personnel services as well as supplies necessary for support of steps taken by the FAO to make possible satisfactory management in the field. It will likewise give the consultants every opportunity to accomplish their task and will furnish them all the necessary technical data.

9895

CSO: 5400/141

NAMIBIA

BRIEFS

VACCINATION CAMPAIGN--The State Veterinarian in Windhoek is holding a vaccination campaign against rabies for dogs and cats in Brakwater today. By law, vaccination of all dogs older than six months is compulsory. Booster vaccinations must be given every three years. [Excerpt] [Windhoek THE WINDHOEK ADVERTISER in English 22 Jun 84 p 6]

CSO: 5400/151

BRIEFS

ANTHRAX VACCINATION PROGRAM UNDERTAKEN--Huancayo, 27 Jun--All livestock raisers in the central mountain region have been warned of outbreaks of symptomatic anthrax, an illness which attacks primarily cattle and sheep. Officials of the XVI Agrarian Region of the Agriculture Ministry have stated that "several cases of the disease have appeared in Canipaco and Cunas, in the upper zone of the Mantaro Valley." They stated that, in order to combat the illness and prevent its spreading, all livestock raisers in Junin Department are required to vaccinate their animals, since otherwise heavy losses would occur from anthrax contagion. German Vega Lozano, superior director of the agrarian sector of this city, indicated that an inoculation program with 3,000 doses of vaccine has been planned for the entire Mantaro Valley. Similar actions will be carried out by the agrarian regions of Japuja, Tarma, Concepcion, San Ramon, Satipo, and Pampas. He recommended that, in order to comply with this vaccination, interested parties contact a local office of the Agriculture Ministry to request the quantity of vaccine needed for their stock. [Excerpt] [Lima EL COMERCIO in Spanish 28 Jun 84 p A-20]

CSO: 5400/2078

FIRST PHASE OF TSETSE FLY ERADICATION PROGRAM

Zambezi River Valley Included

Harare THE HERALD in English 21 Jun 84 p 1

[Article by David Masunda]

[Text]

THE first phase of the eradication of tsetse-fly from the 320 000 square km "common fly belt" of Zimbabwe, Zambia, Malawi and Mozambique, will start next June and is expected to cost about \$19 million, an agricultural adviser to the EEC, Mr Friedrich Nagel, said this week.

The initial stage of the three-year programme sponsored by the EEC, would involve the eradication of tsetse in the eastern and north-eastern border areas of Zimbabwe and the northern lake shore area of Kariba (Zambia), he said.

Detailed tsetse distribution surveys will also be carried out at the same time in Malawi, Mozambique, Zimbabwe and Zambia.

Only after distribution surveys of the fly are carried out in Malawi and Mozambique, will eradication begin in the two countries.

These surveys would also be carried out in Zimbabwe and Zambia to identify new areas of tsetse threat.

Mr Nagel said this preparatory stage would include research in aerial

spray, the environmental impact of insecticides used for tsetse eradication and the adaptation (or development) of tsetse trapping methods for large-scale eradication.

"Zimbabwe is very advanced in tsetse eradication," said Mr Nagel. Some of the methods in use in Zimbabwe would be tested in other countries "to apply to their local conditions".

"If these give conclusive results, then in the second phase of the programme these methods will be applied."

He said the EEC would evaluate the success of the first phase and other donors might step in for the second large-scale eradication phase which, according to assistant director of the Tsetse and Trypanosomiasis Control Branch, Mr Brian Hursey, could take more than 15 years.

Mr Nagel said further EEC participation in the programme would depend on the success of the first phase.

If the tsetse control branch stopped its operations, about half the

country and two-thirds of the national herd would be under the threat of tsetse, said Mr Hursey.

"The tsetse fly front is now along the Zambezi Valley stretching from Binga to Nyanga. It covers an area of about 65 000 square km," he said.

Tsetse had been cleared in Mutoko, Nyanga, Pfungwe, Mt Darwin and the surrounding districts in 1972, but control operations had to be stopped because of the war.

"These were some of the areas we had to abandon first. Since 1972 we have had no control in these areas and tsetse came back into the country until it reached its natural limit area."

The department has now formulated a policy in which most of its efforts in the next four to five years will be concentrated in the western region — south of Lake Kariba.

Once that area is cleared, re-invasion of the fly from Zambia will be stopped by the lake.

The department is now giving prophylactic drugs

to cattle in areas where it has no control work. "These drugs protect them for three months," he said.

About 10 000 square km will be sprayed between now and September. Ground spray will cover 8 000 square km and air spray the remaining 2 000.

"Air spray is fairly new to us. We are trying to develop the method for use in hilly country."

An experimental field trial to evaluate this method has been set up in the rugged Omay district and scientists from Wellcome Research Laboratories and others from the Tropical Development and Research Institute of London will be working with the Tsetse and Trypanosomiasis Control Branch.

Effective Use of Dip

Harare THE HERALD in English 21 Jun 84 p 9

[Text]

THE use of a dip with a fly repellent could help eradicate tsetse fly killing cattle along the Zambezi Valley at no extra cost, a Centenary farmer said yesterday.

Mr Alf Jackson, of Hereford Farm, said trypanosomiasis caused by flies which had been pestering his Shona and Afrikaner stud four years ago had been eliminated by this dip.

"Three to four years ago I had a lot of cattle deaths and I did not know what was killing them," he said. "I started collecting blood samples and then I called in a veterinary surgeon who diagnosed that we had different types of tryps."

"I then used a dip with a powerful fly repellent and I have never had tryps on my farm. Two neighbours I advised to do the same are now running their herds free of flies."

Mr Jackson made the suggestion after reading an editorial in The Herald of Friday which expressed concern about lack of co-ordi-

nation in the fight against tsetse fly in the Maramba and Pfungwe areas of Murewa.

He said that through experiments he had found out that cheap dips with a fly repellent could remain effective for a short period while expensive ones which could last three weeks could even kill fly.

KILLING

Tryps of a serious strain were killing Mr Jackson's cattle in three days while he did not even know they were sick, but the more common variety would kill in about three weeks.

"Now I use various types of dips and I always make sure they have a fly repellent," said Mr Jackson. "Unfortunately labels on dip containers make a fuss about killing ticks while not mentioning that they also repel or kill flies."

"The cheapest dip on the market has been very effective and at no extra cost."

He said that if such dip

could be used along the Zambezi Valley, and with communal farmers dipping their stock once every week, then tsetse fly would be deprived of a host.

If the dip fails to kill the fly, it would at least enable cattle to protect themselves against attacks. Mr Jackson said he strongly believed that it was now necessary to dip all communal sector stock with a dip containing a fly repellent.

He suggested that farmers who could not dip their stock every week because they were far away from the tank could use the simple plastic spray pumps common in every home these days.

The director of the Veterinary Services Department, Dr Jimmy Thompson, said the Government had a big experiment with a very good fly repellent at the moment.

Although preliminary results were available, he said, the department had yet to analyse results, particularly the cost, before making a decision.

Villagers Hard Hit

Harare THE HERALD in English 26 Jun 84 p 6

[Text] PEOPLE in Maramba and Pfungwe areas, in Murewa District, are experiencing the worst tsetse fly outbreak in many years, according to villagers interviewed by the Zimbabwe Information Service.

Last month villagers said hundreds of cattle were being either skinned and their carcasses buried or burnt, or buried with their skins.

The district council chairman, Cde Peter Chapindika said: "Well-built cattle pens are now idle. They are now storage places for skins, which no one wants

to buy. Plenty of cattle, donkey and goat manure is the only sign left to show that the people had many animals."

The areas most affected are Bangari, Borera and Saparanyambuya in Maramba and parts of Chitsungo, and Dindi in Pfungwe. The people there are now appealing to the Government to provide them with tractors to do their winter and next season ploughing.

All the local people interviewed asked the Government to act soon to control of tsetse flies. Cde Chapindika said that some families who once had 40 to 60 head of cattle were now tilling their land with hoes. "It is like serving a hard labour sentence", he said.

Cde Jeremiah Mudzinganyama, councillor for Tsiga ward, said cattle in his ward were dying daily and they were in such a bad state that people simply burnt them. Other councillors said the same thing.

The area's district administrator, Cde Francis Pomerai, said he had already reported the situation of his ministry.

Cde Emmanuel Mukunga, the area's veterinary officer, blamed the people themselves for not bringing their animals for inspection and treatment regularly.

"I have already called a meeting with councillors to work out ways to force these people to bring their animals for treatment. Without cooperation from the povo, my task in eliminating tsetse fly will be very difficult," he said.

CSO: 5400/155

MEASLES HITS BEEF INDUSTRY

Harare THE HERALD in English 29 Jun 84 p 5

[Text] The spread of beef measles in cattle, mainly as a result of poor human sanitation, is costing the cattle industry \$2 million annually, the Deputy Minister of Agriculture, Dr Swithun Mombeshora, has said. Speaking at a graduation ceremony of traditional midwives and farm health workers at the Tsungubvi Clinic, Mazowe, on Wednesday, Cde Mombeshora said the incidence of beef measles had increased from 0.97 percent to 2.18 percent between 1979 and 1983 because of the contamination of grazing pastures by human carriers of tapeworm.

As the consumption of beef increased with the probable lack of inspection in the rural areas, there was likely to be an increase in the number of people with tapeworm. The resettlement schemes were also expected to lead to greater contamination of the veld by human carriers.

Cde Mombeshora called for closer cooperation between his ministry, the Ministry of Health and communal and commercial farmers to help remove this disease which affected both humans and animals.

Cde Mombeshora also noted that the Ministry of Health had not yet embarked on the training of the trainers of traditional midwives although a start had already been made in Mashonaland Central.

The introduction of farm health workers was a welcome innovation for the farm workers who were the backbone of the economy.

CSO: 5400/157

ZIMBABWE

BRIEFS

BUFFALO TO BE DESTROYED--THE Minister of Agriculture has ordered the destruction of buffaloes in 12 districts of southern Zimbabwe as part of a programme to combat foot and mouth disease. The order, published in yesterday's Government Gazette, was cited under the Animal Health (Destruction of Buffalo) order, 1984. It was taken after consultation with the Minister of Natural Resources and Tourism. The destruction of buffaloes was ordered in the districts of Beitbridge, Binga, Bubi, Bulilima-Magwe, Bikita, Chiredzi, Gwanda, Hwange, Lupane, Matobo, Nyamandlovu and Mwenzezi. [Text] [Bulawayo THE CHRONICLE in English 16 Jun 84 p 5]

CSO: 5400/155

MOTH THREATENS COCOA CROP

Kuala Lumpur NEW STRAITS TIMES in English 14 Jun 84 p 9

[Article by K.C. Jong]

[Text]

KUCHING, Wed. — Sarawak's Agriculture Department is keeping a close watch over the recent spread of the 'cocoa pod borer' moth into the State following destruction amounting to millions of dollars in plantations in Sabah.

Though experts believe they have contained the outbreak of the parasite in Sarawak, they are taking no chances and have warned cocoa plantation owners to be on their guard.

The moth which destroyed plantations in Tawau, Tenom and Sandakan in Sabah, was first detected in October last year on a plantation in Lawas which is in the Fifth Division of Sarawak and close to the Sabah-Sarawak border.

More than 50 per cent of the 400 acres of cocoa in the Samaha Estate in Lawas were infested with the moth's larvae, which is believed to have been in cocoa seeds which made it's way into Sarawak from Sabah despite strict import controls.

Tiny wasps

In January it spread further down to the Fourth Division of the State to the 1,500 acre Sarawak Land Development plantation at the 80th kilometre Miri-Bintulu road where infestation was found as high as 80 per cent.

According to officials from the Crop Protection Depart-

ment here the two areas had been sealed off immediately after detection and strict instructions given that the seeds or pods should not be moved out of the area.

Cocoa farmers as far as Sibuan and Sarikel have been warned of the outbreak and have been told of the precautions to take as a preventive measure.

According to experts, the moth, which is also called the 'cocoa pod borer' first attacks the crop by laying eggs on the ripe pods thus allowing the larvae to hatch and eat into the flesh of the seed.

This causes the pod to produce smaller beans and produces premature yellowing, resulting in the crop being picked too early.

A Crop Protection Department spokesman said it would be difficult to completely destroy the moth because of the vast area it has spread. He said that in two months it could spread as wide as 1,000 acres.

At present the department is concentrating on containing the menace with the hope that the level of infested crop would be low.

The outbreak can be considered 'serious' as yields in Lawas and Miri were down 15 per cent this year — this being just a small proportion of the 60 per cent of harvest which were lost in Tawau in 1982.